



Partisan science and the democratic legitimacy ideal

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Abstract

The democratic legitimacy ideal requires value judgments in science to be legitimised by democratic procedures in order for them to reflect the public interest or democratic aims. Such a view has been explicitly defended by Intemann (2015) and Schroeder (2021), amongst others, and reflects a more widely shared commitment to a democratisation of science and integration of public participation procedures. This paper suggests that the democratic legitimacy ideal in its current form does not leave space for partisan science – science that is politically or societally engaged. This is problematic because partisan research can contribute substantially to science and society, a point that I will illustrate with a recent case study from the Netherlands. To resolve this problem, I scrutinise the notion of democratic legitimacy and consider its use in the values in science discourse. Current discussions focus on democratic decision-making procedures to legitimise specific value judgements. I show that this focus does not adequately represent sound procedures of legitimisation at the hand of political theories of representation. Consequently, I develop a different approach: I propose to consider scientists as a special case of representatives who are authorised to make independent value judgements while nevertheless being constrained by the demands of their constituencies. Based on this approach, I argue that values in science do not need to be based on democratically agreed upon aims or the public interest in every instance. Instead, I advocate for a pluralist system of scientific mandates, which differs from both value pluralism and the democratic legitimacy ideal.

Keywords Democratic legitimacy · Activist science · Values in science · Impartiality · Democratic aims approach

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1 Introduction

Partisan science is controversial among philosophers, members of the public and scientists alike: science that openly aligns itself with political or societal groups generates discussion about some of the very values that have made science into a source of authority and credibility. In philosophy of science, this controversy finds its main expression in the values in science debate. Here, the key questions concern the impact partiality, activism and non-epistemic interests may have on value judgments in scientific research and, specifically, when such influence is legitimate. Feminists and other non-ideal thinkers in particular have made a strong case for the value and indeed necessity of the contributions made by politically and societally engaged science. Partisan scientists have laid open hidden and problematic value assumptions in established scientific custom and used their authority to help bring about social change. The controversy is due in part to the presence and persistence of counter examples: instances of industry funded research exerting undue influence, for example, or ideologically motivated research later shown to be epistemically detrimental and/or intentionally misleading the public (Oreskes & Conway, 2010; Proctor, 2011; Hicks, 2014; Elliott, 2017; Wilholt, 2022).

The negative potential of partisan science has led some philosophers within the values and science debate to argue against partial science all together: to prevent negative influences of non-epistemic interests and retain public trust in science, they maintain, researchers should be oriented towards the public interest. Furthermore, when opposing values or interests have to be accommodated within the research process, these decisions should be made democratically: directly or indirectly, they hold, the public or its representatives should be involved (Kitcher, 2011; Intemann, 2015; Lusk, 2021; Schroeder, 2021). In this way, partiality in research can be prevented while still acknowledging the value-ladenness of science. I call this position the democratic legitimacy ideal.

My complaint against the democratic legitimacy ideal is that it throws out the baby with the bathwater. In this paper I advocate for a pluralist system of scientific mandates that allows us to acknowledge the importance of partisan science without giving up a democratically legitimised science. This argument turns upon the definition and possibility of democratic legitimacy in practice. Current discussions within philosophy of science focus on democratic decision-making procedures as a means to legitimise specific value judgements. I intend to show that this focus does not adequately represent sound procedures of legitimisation at the hand of political theories of representation. Consequently, I develop a different approach: I propose to consider scientists as a special case of representatives who are authorised to make independent value judgements while nevertheless being constrained by the demands of their constituencies. In that way, we are not forced to find ways to delegate value judgements to the public (or its representatives). Instead, we can assess their work and the legitimacy of their decisions in light of their role as representatives and profit from the substantial literature on those mechanisms that (may) contribute to the legitimacy of acts of representation. Consequently, I argue that values in science do not need to be based on democratically agreed upon aims or the public interest *in every instance*.

This paper is organised as follows: The first section explains why partisan science poses problems for approaches that advocate for democratic legitimization of values in science. Section two introduces a case study from the Netherlands - the implications of which I apply to debates on democratic legitimacy of values in science in section three. In the last section, I sketch an alternative approach, comparing the role of scientists to that of political representatives in order to posit my final stance regarding the mechanisms of democratic legitimization and the importance of partisan science.

2 Partisan science and the democratic legitimacy ideal

Let me begin with a terminological clarification: what is partisan science? For the purposes of this paper, I take partisan science to be scientific research that aims to further the interests of a specific group, cause, or actor. This includes research where the scientists themselves are part of a social movement as well as cases where the research is commissioned by partisan groups or for industrial causes. Partisan science often defends views that are non-mainstream and may employ activist means to convince others of the rightfulness of these views. Furthermore, the value judgements they make in the selection of research questions, the weighing of inductive risks and selection of methodologies are influenced by their partisan commitments (with constraints; I will return to epistemic concerns in sections four and 5.3). Examples of partisan science range from research done by and for NGOs and activist groups (such as the World Wildlife Fund or Amnesty International) to political movements within science such as feminist or Marxist science, industry funded research (for instance by pharmaceutical companies) and think tanks (such as the Cato Institute, known to have a political leaning). Kristina Rolin, who has published on issues related to activism and politics in science (2016; 2021) uses “scientific/intellectual movements” (SIM), a term taken from sociology of science, to describe a similar phenomenon. She focuses, however, on research that challenges “normative expectations *within* a given scientific or intellectual domain” (Frickel and Gross cited in Rolin, 2016, p. 15, emphasis added). While this is the case for some instances of what I call partisan science, it is not so for all. For instance, research conducted or commissioned by Greenpeace might not substantially challenge *scientific* norms and expectations but yet explicitly serve partisan and activist goals. Rolin furthermore does not include industry funded research in her discussion of SIMs, given that such research is usually not considered a movement. It is, however, partial and partisan and, what is more, often entangled with ideological views (cf. for instance Oreskes and Conway [2010; 2022]) which is why I consider both together. Important differences between grassroots movements and industry funded research will be discussed in Sect. 5.3. I chose the terminology of partisan science to draw out the contrast to research that aims to be neutral or oriented toward the interest of the public as a whole.

Feminist philosophers of science have argued that some forms of partisan science are epistemically and politically beneficial to science and society (Longino, 1990; Harding, 1992; Schiebinger, 1999; Kourany, 2010; Wylie, 2012; Intemann, 2020; Jebeile & Crucifix, 2021). Longino’s (1990) argument in defence of this position is that underlying value positions are often invisible to those who hold them. We there-

fore ought to foster a *plurality* of views in science so that opposing factions can force each other to make explicit and defend such value judgements that would otherwise remain unspoken and unquestioned. This view attributes an important role to political commitments and activism in science. Longino is “suggesting that a feminist scientific practice admits political considerations as relevant constraints on reasoning, which through their influence on reasoning and interpretation shape content” (ibid., p. 193). A second line of reasoning, prominent among standpoint theorists, is that existing power imbalances make it necessary for marginalised groups to engage in activism in order to have their voice heard (Harding, 1992; Intemann, 2010; Wylie, 2012; Rolin, 2016). Feminist philosophers have supported their position with various examples of the positive impact socially engaged science, or partisan science, taken from archaeology, medicine, sociology, biology, and other areas (see e.g. Schiebinger, 1999; Wylie, 2012; Intemann, 2020).

These views are still present and have their defenders within philosophy of science (for example Kourany, 2010; Rolin, 2016; Oreskes, 2019; Jebeile & Crucifix, 2021), and not just among feminists. In light of the backlash that climate scientists have experienced in response to their activism, it has been argued that some politically engaged science may be permissible and even desirable (Oppenheimer et al., 2019; Latour, 2018). The pro-partisan science position, however, leaves open a number of questions concerning both how to distinguish and how to deal with problematic instances of partisan research (Hicks, 2014; Elliott, 2017; Holman & Wilholt, 2022) and how to bring together partisan research with the neutral role science has been attributed in political decision-making procedures (Lacey, 2013; Lackey, 2007; Lusk, 2021). One strategy of dealing with these concerns in current discussions on values in science has been to argue that key value judgements should be made by the public or its representatives. I call this view the democratic legitimacy ideal for values in science.

Andrew Schroeder’s (2021) paper “Democratic Values: A Better Foundation for Public Trust in Science” defends this ideal. Schroeder argues that “when scientists must appeal to nonepistemic values in the course of their work, they should appeal to democratic values—roughly, the values held by the public or its representatives”. When scientists research sexual harassment, for instance, they should use a classification scheme that is “reasonably faithful to how the public views different violations” (ibid.), rather than adopting a scheme that is in line with their own or a particular group’s value position. Following this line of thought, feminist research on sexual harassment would be problematic given that feminist views on what constitutes sexual harassment can hardly be taken to be representative of the public’s view in many parts of the world (including states such as the US) (cf. Manne, 2018). Anticipating similar concerns, Schroeder (2021) adds the qualification that democratic values are necessarily “laundered”: values that “conflict with basic democratic principles of equal worth” are excluded even if they are endorsed by a majority. Yet feminists and non-feminists often disagree precisely on the question of when a definition of sexual harassment is sexist and when it is not. Sexual harassment is in fact an excellent example that researchers should not be restrained by democratically agreed-upon values given that the very concept was developed by feminists: the public would not

have access to this concept if researchers had not endorsed the activism that brought it into common use (cf. Fricker, 2009).

Nevertheless, Schroeder's (2021) position might still be compatible with a commitment to partisan science in principle, given that his starting points concern public trust in science. He makes claims about what scientists "should" do to retain public trust, but does not outrightly exclude the possibility and worth of research which is conducted by "explicitly ideological organizations". The situation is different when democratic ideals are applied to the question of when values are *legitimate* in science, as Kristen Intemann has done in "Distinguishing between legitimate and illegitimate values in climate modeling" (2015). In this paper she proposes a democratic version of the "aims-approach" (cf. Elliott & McKaughan, 2014) according to which "it is legitimate for scientists to appeal to non-epistemic values insofar as doing so will promote democratically endorsed epistemological and social aims of research" (ibid., p. 218). For example, if a group of climate modellers has to decide on a discount rate in their models, their choice will indirectly impact the "value" that is attributed to future generations and their interests. In such cases, "individual scientists will have obligations to make value judgments about which types of models, methodological approaches, conceptual frameworks, or strategies for dealing with uncertainties best promote [...] democratically endorsed aims" (ibid., p. 219). Intemann's position is hard to pin down, in part due to a vagueness concerning her usage of "aims" and "values" (cf. Lusk, 2021, p. 106). But the basis of her proposal, like Schroeder's, is that value judgements should be based on what the public wants or believes, rather than on what scientists or certain groups in society think is right.

While Schroeder and Intemann are particularly strong examples for the type of position I am interested in, they are not the only ones: attempts to find a stable ground for value judgements in science by means of democratic procedures can be found in the work of other philosophers of science, too. For instance, in their work on thick concepts Mark Fabian and Anna Alexandrova (2022) have argued that it is not useful to eliminate value judgements or to keep them "in house". Instead, "the responsible thing to do [for scientists], especially in the context of public policy, is to make this value judgement through a legitimate political process that includes all the stakeholders of this research" (ibid., p.2). Similar ideas are also expressed in discussions on "public interest science" (Kitcher, 2001, 2011; Douglas, 2009, 2021; Lacey, 2013; Lusk, 2021; Resnik & Elliott, 2023).

The problems that democratic legitimacy approaches try to address are important. There have been and continue to be cases where it is problematic for scientists to further the aims of partisan groups with their research. I nevertheless argue that, with regard to partisan science, the democratic legitimacy ideal is too rigid. Even if the proposal that I will make in the remaining paper does not convince, proponents of the democratic legitimacy ideal need some account to explain how the instances of partisan science that positively contribute to science – which, after all, were a starting point of the values in science debate – fit into their view. This relation, between partisan science and the democratic legitimacy ideal, is not always apparent: it is not uncommon for philosophers to endorse both pro-partisan-science views and the democratic legitimacy ideal. Intemann, for instance, is well known for her contributions to feminist philosophy of science (Intemann, 2010, 2020). She herself has

argued that feminist research played an important role to reveal biases and “implicit value judgments that were unacknowledged and, in many cases, unjustified” (2020, p. 203). Yet if those researchers would have stuck to democratically determined aims of their time – as she argues in her 2015 paper they should have – it seems unlikely that these aims would have been feminist.

In order to bring these two positions together, I argue that one needs to adopt a view which allows for a pluralism of mandates in science. To substantiate this claim and explain why it is a plausible approach from the perspective of theories of democracy too, the next section will introduce a case study that makes more tangible the concerns of the defendants of the democratic legitimacy ideal but also demonstrates the importance of partisan science.

3 Case: Tata Steel IJmuiden

This case study concerns the emissions of a steel factory in the IJmond region in the Netherlands (to the north-west of Amsterdam), currently owned by the Indian company Tata Steel, and a running conflict that flared up in 2021 when research was undertaken to measure these emissions and establish the possible health risks they pose. While the case is perhaps not exceptional (risk assessments of this kind and the value judgements involved have been discussed by other philosophers in the past [see for instance Jasanoff, 1990; Cranor, 1995; Elliott & McKaughan, 2014]), it is helpful in showing both the importance and the limits of the democratic legitimacy ideal. I will begin by sketching the issue at hand and the value judgments within the relevant scientists’ work that were being contested by local residents.

The steel factory in IJmuiden dates back to 1918, when it was founded as the *Koninklijke Nederlandsche Hoogovens*. In 1999 *Hoogovens* fused with British Steel to form *Corus*, which in turn was taken over by the Indian group Tata in 2007. With a workforce of about 9,000 people and indirectly providing an estimated further 35,000 people with jobs, the factory is a major employer in the area and is generally taken to treat its employees well (cf. De Volkskrant, 2020). Nevertheless, residents of the surrounding towns of IJmuiden, Beverwijk, Wijk aan Zee and Velsen have long voiced concerns over the factory’s emissions and their potential link to health problems (NRC, 2021d). In response, the Dutch public health research institute RIVM and three other research bodies (GGD Kennemerland, GGD Amsterdam and NIVEL) were asked by the province North Holland and the municipalities in the factory’s neighbourhood to ascertain what health issues there are in the area, measure the air quality and judge what effect the latter has on the residents’ health (Elberse et al., 2021b).

Multiple reports were issued in recent years that confirmed a high incidence of health issues (Elberse et al., 2021a; Oosterlee & Nijbroek, 2020), but caution was exercised in making causal claims that would relate these health issues to Tata Steel’s emissions. This has prompted disapproval from local interest groups, whose criticism centred around three main points. Firstly, they took issue with the fact that a report that was supposed to be released in summer 2021 was postponed until after an important parliamentary hearing in September 2021. This hearing was to decide on

the future of Tata Steel and on conditions for governmental subsidies (NH Nieuws, 2021c; RIVM, 2021). Secondly, the name Tata Steel was removed from a GGD report about the incidence of cancer in the surrounding area (Noordhollands Dagblad, 2021; NRC, 2021a; NOS Nieuws, 2021a). A later investigation (Heskes, 2021) supported the GGD's decision not to include considerations on causal factors at play, and accordingly not to discuss Tata's potential role, claiming their task was only to monitor cancer cases in the area. It furthermore concluded that Tata Steel IJmuiden exerted no influence on the writing of the report. Nevertheless, this incident further decreased residents' trust in several public institutions, including the research institutions involved (Heskes, 2021; Het Parool, 2021). Lastly, the RIVM's research took measurements in the surrounding towns and did not verify the numbers provided by Tata concerning the emission levels at the factory (NOS Nieuws, 2021b; RIVM, 2021; NH Nieuws, 2021d).

As a consequence, interest groups from the area (most notably Frisse wind, IJmondig and Stichting Schapenduinen) collected funds to conduct their own research that was to take measurements in direct proximity of the factory and deliver results before September 2021 (NOS Nieuws, 2021b; NRC, 2021c). The RIVM subsequently published their report on heavy metal pollution in the area in early September; before the parliamentary hearing (Mennen et al., 2021; NH Nieuws, 2021e). It included a statement that while "it was not the report's aim to identify possible sources of PAH's [polycyclic aromatic hydrocarbons; substances that are known to cause various forms of cancer] and metals, the results provide an indication that a substantial part of the settled dust originates from Tata Steel's premises" (Mennen et al., 2021, p. 12)¹. The final report published in January 2022 confirmed this and furthermore remarked a discrepancy between the emission levels one would expect in the surrounding towns based on Tata's measurements at the factory and the actually measured levels of emissions (Elberse et al., 2021b; RIVM, 2022b; Trouw, 2022).

For the purpose of this paper, I will focus on the assessment if Tata's emissions are posing serious health risks for local residents as well as the judgement of scientists to at first refrain from making such a claim and later endorse it. Two value-laden choices seem particularly pertinent here. Firstly, the formulation of research questions and consequent methodologies allowed for certain facts to be proven rather than others. The questions that were investigated at first concerned what health complaints there are in the region and how they compare to other parts of the Netherlands, the air quality of the area and, lastly, the relation to the observed health complaints. The question *why* the air quality was lower, i.e. the source of measured emissions was initially not asked. As the RIVM stated:

If local residents want to know the exact emissions of Tata Steel then it is understandable that they want to take measurements at the source. [But] if you want to know what consequences these emissions have for people's health, measurements at the source cannot provide an answer. This is because the results of measurements at the source cannot be straightforwardly connected to health issues of people living close to Tata Steel. That's exactly why the research the

¹ Translation mine.

RIVM did is of importance here: Which substances are present in the inhabited area around Tata Steel and what health risks do they pose? (RIVM, 2021)²

Secondly, the thresholds scientists set concerning when to make conclusive statements had implications for the different parties involved and had the potential to either benefit or disadvantage some groups rather than others (for a more detailed account of the role of values in threshold setting see Rudner, 1953; Douglas, 2009; Elliott & McKaughan, 2014; Elliott, 2017, Chap. 5; Ward, 2021). In this case, one of the consequences that had to be considered was the health risk the emissions pose for locals, in particular children living in the area. On the other side stood the consequences, both political and legal, of the report for the future of the factory, which remains a major employer in the area (NRC, 2021d; NH Nieuws, 2021b). Some of the actors involved gave justifications for why they supported or chose certain thresholds of evidence before speaking out. As mentioned above, in the context of the allegations that the name Tata was taken out of a GGD report, an ombudsman was consulted. He stated that, because any scientifically confirmed causal attribution of health complaints to Tata's emissions could be used in legal claims against the company, high thresholds of evidence had to be applied (Heskes, 2021). In contrast to the ombudsman's position, lead researcher of the second report, Janneke Elberse, justified their change of position with reference to the significant health risk posed by the emissions, especially for children. She stated that, while the link to the Tata factory was not conclusively proven, the measured substances are so typical for steel industry that it wouldn't have been fair (to the residents of neighbouring towns) to wait with drawing conclusions (Trouw, 2021).

I argue then that the decision on behalf of the researchers whether and when to issue a statement concerning the causal role of Tata's emissions on some residents' health issues was value-laden. Different risks and interests had to be weighed to judge when enough evidence had been gathered. And furthermore, the methodologies and formulation of research questions influenced which evidence would be gathered first and therefore *when* the question of causality could be answered. This is expressly not to say that the research was epistemically illegitimate or problematic. Scientific norms and methodological rules were, as far as we can tell at this point, observed. But important value-laden questions had to be answered in the context of this scientific assessment and the way these questions were answered played a role in the public's reception of the research and the level of trust that was put not only towards the research institutions but all public institutions involved (NRC, 2021c, 2021b; NH Nieuws, 2021d).

4 Applying the democratic legitimacy ideal

In one important way, this case study confirms the democratic legitimacy ideal: it does indeed seem problematic when researchers who are tasked with a scientific assessment, such as the question of whether a factory's emission poses serious health risks

² Translation mine.

to the inhabitants, prioritises the aims of specific groups and in particular commercial interests over that of the public as a whole. This is why taking Tata's name out of a GGD report was received so negatively: it aroused the suspicion that the company exerted influence on the scientific assessment (even though this suspicion was not confirmed by the consulted ombudsman) (NRC, 2021a; Heskes, 2021). Assessments such as in this conflict can influence political decision-making processes and have important legal implications, too. Consequently, when specific actors have more influence or are considered more strongly in the researchers' judgements, they gain an unfair advantage in the subsequent democratic decision-making process. Lusk (2021) calls this the political legitimacy argument which, as he claims, speaks in favour of the value-free ideal (see e.g. Betz, 2013; Bright, 2018) or the democratic legitimacy ideal (for Lusk).

It should be noted at this point that democratic concerns are not the only relevant ones when it comes to value-laden science. Non-epistemic values, be they democratically determined or not, can stand in conflict with epistemic values such as accuracy, reliability, or fruitfulness (Elliott, 2017; Wilholt, 2022; Elliott & McKaughan, 2014; Douglas, 2016). Given that a key task of science in contemporary societies is to provide reliable knowledge, this is an important concern and has as such been the focus of philosophical discussions. In the context of these discussions, differentiations between types of value influences and different roles they might play have been proposed (Douglas, 2009; Rolin, 2021; Ward, 2021; Anderson, 2004; Hillgardt, 2022). The democratic legitimacy ideal does not address all the different concerns that arise from these different value influences equally well. It usually focuses on cases where different choices are acceptable from an epistemic perspective (such as in the example of this paper) but that likely come with different societal and political impacts (Zina Ward [2021] calls this "affected goods": that is, when "values are promoted or undermined by a choice"). It is in such cases that democratic theories can be most fruitfully applied. They do not necessarily help with identifying epistemic constraints on research which is why the approach of this paper should be combined with other existing demarcation strategies (cf. Holman & Wilholt, 2022; Resnik & Elliott, 2023). Nevertheless, given that questions concerning societal and political impacts of research are of vital importance and that current philosophical discussions do often focus on epistemic or ethical questions, it seems warranted to look closer at the political dimension of the values in science problem, too (cf. Schroeder, 2020; Lusk, 2021). In Sect. 5.3, I will briefly return to the question what epistemic problems might arise in the context of partisan science.

According to the democratic legitimacy ideal, then, scientists should base their non-epistemic judgements on values and aims that are democratically agreed upon. Furthermore, the judgements they have made can in hindsight be assessed in relation to this ideal. That is: the democratic legitimacy ideal provides criteria to criticise and evaluate the research in light of the "degree to which the value selection process embodied procedures that align with the ideals of deliberative democracy" (Lusk, 2021, p. 108).³ This holds three distinct advantages. First, scientists who have no par-

³ Lusk explicitly defends a deliberative democratic ideal. I do not restrict my discussion to such view of democracy, but the general approach he outlines is what this paper is concerned with.

ticular ethical expertise would no longer bear the responsibility to weigh the consequences of their decisions (cf. Rolin, 2021; Alexandrova & Fabian, 2022; Schroeder, 2021). Secondly, no group will gain an unfair advantage in political decision-making processes “through the backdoor” of scientific research (cf. Lusk, 2021). And lastly, (although this view is not shared by all defendants of the democratic legitimacy ideal) research on a specific topic should all start from the same value judgements (i.e. those that are democratically agreed upon) and thus speak in one voice if the research is carried out correctly (Schroeder, 2021).

In light of these advantages, it is worth considering if and how the democratic legitimacy ideal can be applied to the case study and to scientific decision-making procedures more generally. I will argue that when we seek to bring the ideal to bare on actual cases, we cannot reap the advantages of the ideal. In many real-world situations, the democratic legitimacy ideal leaves unclear what kind of role scientists should play, does not resolve the problem of scientists having to make value judgements, does not provide clear demarcation criteria, and cannot tell us how to approach partisan science. There are a number of open questions with regard to the application of this ideal that could show this; this paper will focus on the question of *who* should be asked to establish democratic aims or values.

The democratic legitimacy approach presupposes that scientists are not authorised to make value judgements on behalf of the public. A group of actors that is authorised to do so in democratic systems, however, are elected politicians. One might argue therefore that value-laden decisions in science can be legitimated by means of a deliberation procedure among elected politicians or within political institutions (Rolin, 2021, p. 523). While this approach cannot be applied to all scientific research - I will discuss some of its shortcomings in a moment - it still warrants attention, not least because, in the Netherlands as in other states, scientific advisory committees are in fact often commissioned by and receive instructions from political institutions such as the government, the Parliament or political parties (for examples from Germany see Weingart & Lentsch, 2008). In the Tata case, some decisions pertaining to the research were taken by political institutions, namely by representatives of the province and the three municipalities in the immediate surrounding of the factory. And when criticisms were raised that no measurements were taken at the factory itself, the RIVM referred back to the instructions they received: to research the air quality in the IJmond region and potential effects on the inhabitants' health, not to research the emissions at the TATA Steel factory (RIVM, 2021). Political representatives thus seem to play a role in existing legitimisation procedures of some value judgements in scientific assessments.

Still, to say that all judgements in science that involve weighing interests can be delegated to political representatives of the public is problematic and fails to capture the complexity of existing systems of political representation. Within representative democracies, a variety of political institutions are involved in decision-making. The parliament works differently from the government, as well as from political parties, federal governments and judiciary bodies. All of them might have a mandate to serve the public and many of them are democratically elected, but they are all variously constituted, authorised, and have their own institutional interests. The RIVM, for instance, belongs to the Dutch Ministry for Public Health (Ministerie van Volks-

gezondheid, Welzijn en Sport) whereas the GGD Kennemerland stands under the municipalities of that region (RIVM, 2022a; GGD GHOR Nederland, 2021). The directives these institutions receive might not only vary, but may even conflict, thereby troubling any notion that ‘political representatives’ should decide about what constitutes a public interest.

Deliberative democrats in the tradition of John Rawls and especially Jürgen Habermas supply a further argument for why value judgements pertaining to scientific research should not, or not exclusively, be decided by political representatives of the public. For deliberative democrats, the legitimacy of a decision depends not only on procedural elements such as fair elections. Decision-making should also be based on sound arguments and well-informed opinions (Fishkin, 2011; Cohen, 2005; Willholt, 2012, p. 113; Brown & Guston, 2009, p. 361; Kitcher, 2011, p. 79). Following this notion, knowledge produced by scientific research is of vital importance for citizens to make good judgements and for the public as a whole to effectively self-govern (Willholt, 2012; Brown & Guston, 2009). This leads to a circularity problem for the government-based approach: Political representatives are democratically legitimated if citizens were able to vote for them on the basis of sound information and knowledge. They need to know for example that global warming is a real threat in order to arrive at a legitimate notion of what their common interest is and who might represent it well. When political representatives influence the production of this very information and knowledge they potentially undermine their own legitimacy (*ibid.*).

A second option is to rely on citizen representatives rather than politicians in determining democratic aims and values. There are different ways of doing so. One is to determine stakeholder groups in an issue at hand and select representatives of those groups. This is common practice in many participatory set-ups: philosophers of science who have taken part in such projects have argued that increasing stakeholder participation can increase public support and trust in expert recommendations (Alexandrova & Fabian, 2022). In the Tata case, some attempts to include stakeholders in decision-making processes were made, although not specifically with regard to the scientific research to be done. In response to a first set of studies on the so-called “graphite rain” in the region, a focus group was formed (chaired by Tata) that included representatives of local citizens. Some participants of these groups were not convinced, however, that their voice and concerns were heard or had any impact (*cf.* Trouw, 2022). There are critical voices on a more general level with regard to stakeholder-based approaches as well, especially concerning such procedure’s potential to legitimise value-laden decisions. One issue is that it is often unclear who the relevant stakeholders are in a given context and who can legitimately represent them. As one judge in the US, charged with determining if an advisory committee was appropriately balanced in terms of the stakeholders involved, put it: “Everyone in the entire United States is a consumer of food products, so I do not understand why *any* American—including all those who have already been appointed to the Committee—would not legitimately be considered a consumer representative” (cited in Brown, 2008, p. 553, emphasis in the original). Another common point of criticism is that stakeholders take part in such deliberations exactly because they have stakes in the matter. They usually have stronger opinions and views than those who do not and are hence not representative (Fishkin, 2011, p. 51; Lusk, 2021).

In response to such concerns a more systematic model of citizen participation has been developed by political theorist Fishkin (2011). He proposes a model inspired by assemblies in Ancient Greece where delegates are chosen by lot in a way that is representative of the population at large. The assembly comes together and deliberates about an issue at hand and only comes to a decision afterwards. Other than elected representatives, citizen representatives do not have to be concerned about re-election and are therefore not under pressure to produce short-term successes. The democratic legitimacy of a citizen assembly, for Fishkin, hinges upon the process of deliberation that allows for well-informed preferences to form as well as that it reflects the public at large. The assembly must be representative both in terms of demographic markers and with regard to the different views held by the population; otherwise, we cannot assume that the decisions taken are the ones that the public as a whole would have taken under ideal conditions. He writes:

If we are to embrace the possibility of deliberative microcosms, we must do so with great care to establish the representational connection between the select group [...] and the claim that this is what the public would think. [...] If [micro-cosmic deliberation] is to acquire credibility, it needs buttressing with systematic investigation. Social science can be employed to give credibility to the claim that a particular strategy of institutional design has been realized to give expression to deliberative democracy [...] (Fishkin, 2011, pp. 93–95).

For some prominent defendants of the democratic legitimacy ideal, this is the most plausible approach to find grounding for value judgements in science (Kitcher, 2011; Lusk, 2021; Lenzi & Kowarsch, 2021; Edenhofer & Kowarsch, 2015). It has also been tried in the context of scientific research with positive results (Blum, 2022; Hewlett et al., 2023).

There are problems with deliberative mini-publics and critics of this model as well. One issue is that it is high in effort and cost. Fishkin (2011, pp. 111–118), who was himself involved in numerous cases of deliberative polling, describes at some length what measures can be taken to ensure the representativeness of the mini-public. To fulfil these standards, mini-publics require substantial financial means, committed organisers, and high time commitment from the participants. Furthermore, deliberations between laypeople and experts comes with the risk of the conversation not taking place at eye-level (Holst & Molander, 2017; Blum, 2022). This is less the case with stakeholders, as they often bring more knowledge and stronger opinions to the table. Lastly, the grounds upon which the legitimacy of mini-publics rests – substantial deliberation processes and the representativeness of its members – are not accepted by all commentators, and also not by all members of the public, as primary (see Rosanvallon [2011] for an account of how views on democratic legitimacy differ over time and between places). This is particularly difficult to deal with when the judgement of a mini-public differs from the outcome of a referendum or other, larger-scale means of citizen engagement (see Fishkin [2011] for examples).

When considering the multiplicity of approaches that exist to establish democratic legitimacy, two problems arise for the democratic legitimacy ideal: Firstly, there is (and most likely will continue to be) persistent disagreement on what the proper

procedures are and accordingly also on questions of whether a specific decision was democratically legitimate (the latter could be the case even if we all agreed on proper procedures, but as long as this is not the case it seems inevitable). This is a problem for the post hoc assessment of scientific research. Some variation on how to evaluate a specific instance of democratic decision-making seems acceptable, especially when one considers legitimacy to be gradual as Intemann (2015) and Lusk (2021) do. Yet in the Tata case, and this is likely so in other conflicts, depending on who you consider to be a legitimate representative of the public, the views on the democratic legitimacy may be diametrically opposed. If one assumes that political representatives should decide on the prioritisation of research questions, for example, the research on Tata's emissions was arguably democratically legitimated.⁴ If one believes a representative group of citizens should have been substantially involved, it clearly was not.

There is a second problem, too. When attempting to spell out what it means to make value-laden decisions in a democratic manner it becomes clear that even well-designed procedures can go wrong in many ways. In most existing democratic states, for instance, industry lobbyists have some (smaller or larger) measure of influence on elected politicians – influence which varies per region, country, industry and area of policy. It hence seems likely that, at least in some cases, those democratically authorised to make value judgements on behalf of the public prioritise the interests of some groups in a way that seems undemocratic. Deliberative mini-publics might make such influence less likely, but they, too, can be dominated by outspoken individuals, moderated badly, fail to be representative or fail to come to an agreement. What should scientists do then when the decision-making process that was meant to legitimise the value judgements in their research was not democratic? What if certain groups clearly did not have their voice heard?

If researchers nevertheless base their judgements on these decisions, there will be cases where they have to knowingly work with undemocratic values. If scientists themselves to go out and consult stakeholder or the public (as Intemann [2015] for instance suggests), researchers have to make a judgement on what procedures constitute democratic legitimacy.⁵ This stands in conflict with the notion that scientists should not make value judgements on behalf of the public and we hence would still have to clarify what political role they are to play. If scientists side with groups that they feel were underrepresented in the decision-making process, they quickly turn into partisan scientists. We then have to clarify what role such research plays and when it is permissible. This is what happened in the Tata case and the democratic legitimacy ideal can give us little guidance on how to interpret this. There were some processes put in place to exercise democratic control over the scientific research. However, from the perspective of participatory democrats these procedures were not ideal and in the view of (some) local inhabitants, their interests were not sufficiently

⁴ As mentioned above, not all value-laden decisions were influenced by politicians, the threshold setting for instance was not.

⁵ This problem could be addressed with guidelines or rules that are democratically agreed upon and that scientists need only follow. Some institutions have put in place such guidelines already, such as the European Commission, cf. Holst and Molander, 2017. It is nevertheless an important point to consider because many participatory research projects now are driven by researchers themselves who have their own views on what is good democratic decision-making and what is not.

represented. To make their voice heard, the local interest groups hired their own researchers and sought the support of scientists and organisations (e.g. the Dutch Cancer Society) (NH Nieuws, 2021a), who agreed with the judgement that existing research did not adequately represent the public interest.

In sum, I argue that the democratic legitimacy ideal in its current form fails to clarify what exactly the political role of scientists should be, as well as the role of partisan science. If we accept that democratic decision-making processes, even well-designed ones, can go wrong, indeed that this is not unlikely to happen in the world that we live in, institutional procedures should reflect this possibility. Rolin (2021) has argued similarly in her paper “Objectivity, trust and social responsibility”. Inspired by standpoint theoretical approaches, she shows that we need scientific/intellectual movements to give less powerful groups of society a chance to have their voice heard. Yet what she does not explore is what this means for democratic legitimacy accounts. If the legitimacy of value judgements hinge on them representing democratically determined aims or agreements concerning the public interest, scientific/intellectual movements and partisan science are not legitimate. Yet it seems that such research plays an important role in the *process* of establishing democratically legitimate values and aims. The remaining paper will propose two conceptual shifts to address this tension and clarify the political role of scientists as well as of partisan science.

5 From values to representation: considering the political role of scientists and its democratic legitimacy

The democratic legitimacy discussion within philosophy of science focuses on values in science. I argue that this focus overlooks a critical point: within contemporary political systems, both value judgements and values themselves are rarely democratically legitimised. Instead, we legitimise *representatives* to make those judgments. The mechanisms of legitimisation that exist at the level of representation cannot be straightforwardly applied to the level of value judgements. I maintain that existing theories on the democratic legitimacy of acts of representation⁶ can benefit discussions on values in science.

The importance of representation in political decision making has been previously acknowledged by other philosophers of science. Intemann mentions it towards the end of her 2015 paper:

There are challenging issues here about who constitutes a stakeholder, how to secure stakeholder participation [...]. Moreover, since it would be unrealistic to have all potential stakeholders participate in a decision-making process, it is unclear who could be said to legitimately “represent” a stakeholder group. (Intemann, 2015, p. 228)

⁶ I draw primarily on the work of constructivist scholars within this field such as Pitkin, 1972; Young, 2000; Mansbridge et al., 2010; Rosanvallón, 2008, 2011; Brown, 2009.

The three models discussed in the previous section each make implicit and differing claims about who or what “could be said to legitimately ‘represent’” (ibid.) the public: elected politicians, stakeholders, or demographically representative citizen assemblies. While I retain that these actors all have an important role to play in the legitimation of value judgements in science, the second conceptual shift that I am proposing is to treat scientists themselves as a particular type of political representative.⁷ While scientists might not be elected, we can nevertheless treat representation as an activity that comes in different guises and scientific research as an activity that bears resemblance to forms of political representation, especially when we assume that there are other factors constituting the democratic legitimacy of representation than just election. This is helpful because theories of political representation present us with a model for a type of agent who has to act and judge independently while simultaneously being restrained by the feedback and opinions of represented parties. Furthermore, considering scientists as political representatives inserts an intermediate level into the discussion on value judgements in science. Rather than arguing that all values are legitimate or that scientists must always to operate from the same value position, individual judgements can be assessed in light of the *mandate* that the respective research institution or group has.

Treating scientists as political representatives comes with its own set of problems. Applying a concept from political theory to science and demanding from science to be democratically legitimate brings together two domains that may function with different rules, norms and standards, and serve different functions in society (Lacey, 2013; Lackey, 2007). But I will argue that scientists, among other things, do fulfil a political role in democratic societies, and that asking how this role is embedded in democratic processes is not only legitimate but necessary. Scientists inform public and political deliberations (Brown & Guston, 2009; Wilholt, 2012) and have important regulatory power, too. A scientist’s mandate is not the same as the mandate of elected politicians, but there is no reason why we could not apply different norms, standards and expectations to these different types of representatives. Philosophy of science may benefit from the theoretical resources of political theory when we adapt them to the specificities of science’s role in a democracy and it may help us clarify both the political role of scientists that remains ambiguous in current discussions and the role of partisan science.

5.1 Clarifying the role of scientists

We can start by recalling a problem the democratic legitimacy ideal runs into. Due to disagreements about what proper procedures for democratic legitimation are and when they have been fulfilled, scientists themselves appear to have to make a judgement concerning who to consult and when to follow the judgement of those they consult. The similarity of this situation to the one of political representatives makes

⁷ The notion of representation that I am particularly interested in here is what Pitkin, 1972 has called “acting-for” and Young, 2000 classified as opinion or interest representation. Other conceptualisations have been applied to the context of science in the past. Brown, 2008 and Eigi, 2020 have discussed scientists as representatives of social perspectives for example. Three very useful general categorisations of political representation can be found in Pitkin, 1972; Young, 2000; Brown, 2009.

it possible to consult theories of representation to gain insight into how such judgements can be made in a democratically legitimate manner.

A traditional problem of theories of representation concerns the proper relationship between representative and represented: the so-called delegate-trustee debate. Advocates of the delegate-view argued that representatives should act *as if* the represented party was present; they should do exactly what their constituents want. On the contrasting trustee view, a representative should do what is in their constituent's *best interest*, even if this is not what the constituent says they want (Pitkin, 1972, Chap. 7). Hanna Pitkin, an influential theorist on representation, argued that the problem is a paradox, and that it is to be endured: Political representatives have to act independently *and* consult with their constituency (1972). It is in principle not possible for all future issues to be pre-empted at the moment when a representative is elected or appointed. As a consequence Iris Marion Young, building on Pitkin's work, argued that we need a "deferring relationship between constituents and their agents, [where] representation moves between moments of authorization and accountability" (Young, 2000, p. 129). Between these two moments, representatives act independently of those they represent, though always in anticipation of having to justify their actions in a way that their constituents might accept.

This type of conceptual transposition allows us to acknowledge that scientists have to make many value judgements independently without explicit consultation with or authorisation of members of the public. It is not per se undemocratic for this to happen. Nevertheless, these value judgements should be oriented towards the best interest of their "constituency", with whom scientists should engage in a dialogue concerning in order to establish what that interest is. The mechanisms discussed above (engagement with political representatives and consultations of stakeholders and mini-publics) will be useful in fostering such dialogue. Yet they will not take away the need for the researchers to come to a judgement about how to synthesise, weigh and apply the views on what is the public interest to their own research and the value judgements that are part of it.

5.2 Clarifying the role of partisan science

The second problem that was discussed above is the unclear status of partisan science. Here, too, the conceptual framework of representation can help, as it allows us to acknowledge and take precautions against the possibility that scientists (as well as politicians and citizen representatives) make objectionable judgements or even abuse their power.

As we have seen, the nature of their role determines that representatives make independent judgements. In order for acts of representation to be democratic, however, there have to be channels in place through which decisions may be objected against, and in drastic cases to be overturned, as well as channels through which representatives are held to account (Brown, 2009; Rosanvallon, 2008). Accountability is an especially difficult issue in the context of science (Holst & Molander, 2017; Douglas, 2021; Wilholt, 2021). While political representatives can be held accountable by means of elections, this is rarely the case for researchers. Legal accountability in the context of scientific research is difficult, too. Should scientists commit crimes,

it is possible to take them to court, but suing researchers for mistakes or misjudgements in their research is controversial (see e.g. Donovan and Oppenheimer [2016] for a discussion of a legal case against seismologists in Italy). One way that allows for channels that enable objection and accountability, however, is to leave room for activism and partisan groups. As Brown (2018, p. 44) has it:

Citizen protest movements and advocacy groups are often highly partisan and non-deliberative, but if they call attention to excluded issues and constituencies, they can improve the deliberative quality and representativeness of other institutions and the system as a whole. The democratic legitimacy of such practices and institutions is indirect. It depends on their fulfilling a particular role within a complex political system.

To have such effect in science, activist groups usually need to either have scientific expertise themselves (this amounts to what Rolin describes as SIMs, cf. Rolin, 2021), have the support of scientists or commission research in their interest. To have the possibility for such scientifically supported activism *some* researchers must be permitted to take sides in existing conflicts, that is, to be non-neutral.⁸ From a representative perspective then, a *general* commitment to neutrality or the democratically determined public interest seems problematic. This brings us to the need for a pluralism of mandates.

5.3 A pluralism of mandates

I have deliberately left open so far who the “constituency” of scientist-representatives might be. This question is likely the hardest one to answer, both on a general level and in individual scientific value disputes. Should scientists take a global perspective, for instance, as Philip Kitcher suggests (2001), or rather focus on the interest of their local or national communities, perhaps their users (Parker & Lusk, 2019) or even their funders? I will close this paper with sketching what a pluralism of mandates could mean - a position that is different from both Intemann’s and Schroeder’s democratic legitimacy ideal and traditional pluralist accounts such as that of Longino. The description of this approach will be incomplete; my aim is to outline its contours so that readers can engage the idea that this approach is plausible from a democratic perspective, too.

Most approaches that advocate for the democratic legitimacy ideal suggest that *all* science should serve the interest of the public. Intemann (2015, p. 218) makes the claim that “it is legitimate for scientists to appeal to non-epistemic values insofar as doing so will promote democratically endorsed epistemological and social aims of research”. This excludes the possibility of research that pursues partisan aims. Traditional accounts by value pluralists, on the other hand, hold that scientists should – as a

⁸ There is a further financial dimension to this problem. Many interest groups do not have the financial means to conduct their own research. In the Tata case, collecting 1 million euro in a short amount of time was only possible because a number of very wealthy individuals live in the area and supported the cause (NH Nieuws, 2021d). This suggests that there might be a need for public funds for such partisan science if it is to achieve a meaningful role in creating accountability and channels for objection.

rule – conduct their research in line with their own value outlook. “The contextualist approach”, for Longino, “indicates that it is counterproductive to try to split oneself into different selves, doing different tasks – a scientist here, a political actor there, perhaps an aesthete over there” (1990, p. 218). In contrast to these views, I argue that the legitimacy of individual value-judgements in research should be assessed *in relation to the representative mandate* of that very research. Such mandates cannot be tied to the role of the scientist qua scientist, but neither can it only be a function of what the scientists themselves hold to be correct.

To draw out some implications of this position, let me return to this paper’s case study. The key scientific actors in this conflict were the researchers working for the RIVM and the GGD. As discussed above, it seems plausible to say that these researchers have a public mandate and should be oriented towards the public interest. Indeed, this aligns with the mandate the institutions themselves declare to have. The RIVM refers to itself as a research institute of the public, committed to a healthy population as well as a sustainable and healthy environment (RIVM, 2022a) and the (national) GGD’s mission (of which the local GGD in question forms a part) is to improve the health “of all inhabitants of the Netherlands” (GGD GHOR Nederland, 2021). We can evaluate the legitimacy of individual value judgements made by those scientists in light of this proclaimed aim: Do the researchers consider the health interests of different groups equally? Do they consider in particular the needs of vulnerable groups? Have they been influenced by commercial interests? And did they consult with the public regarding the intended outcome of the research? As the Tata case illustrates, the suspicion that researchers (and political representatives) with a public mandate could be influenced by commercial interests is hugely damaging to the credibility of resulting scientific research. To fulfil their function well, public researchers hence have to demonstrate their independence and be able to justify their decisions in light of their role.

This framework leaves open if a public mandate must entail a commitment to neutrality or impartiality. Mark Brown has argued that neutrality is a useful criterion, especially when it comes to the assessment and accountability of experts who serve as public officials. He writes:

Whereas “objectivity” generally refers to the impersonality of the procedures used to produce scientific knowledge, “neutrality” refers to either the absence, or more likely, the balancing, of social values and political interests. In policy-oriented expertise, the search for neutrality is both more appropriate and more attainable than objectivity. [...] Neutrality [...] may not always provide correct decisions, because not all elements of a problem can be assessed according to the same standard of correctness. However, because nonexperts are at least potentially capable of assessing it, neutrality provides a formal standard for the public accountability of expertise. (Brown, 2009, p. 219)

In some contexts, this may be useful and indeed necessary to reach agreement. Sheila Jasanoff, in her book on “regulatory science” (science used in policy making), finds that, in order to produce “serviceable truths”, advisors have to engage in processes of negotiation and balancing of different views. The need for negotiation, Jasanoff

holds, “commits scientists, no less than other actors, to moderating their views toward a societal mean” (1990, p. 250). However, one might argue that researchers with a public mandate need not or even should not remain neutral or impartial in all cases. With regard to the self-declared missions of the RIVM and the GGD, for instance, it is noticeable that, although they might be oriented towards the interest of the public, they are so from the perspective of public *health*. This is a specific aspect of the public’s interest, and one that might conflict with other interests, such as the public’s financial security. Representing specific public interests may thus require taking sides in existing conflicts. What this shows is that the legitimacy of researchers’ mandate also requires democratic deliberation about the formulation of mandate itself, i.e. norms and ideals that are associated with and expected of public research.

Assessing the legitimacy of partisan science within this framework is more difficult but follows the same scheme. Partisan scientists, too, can be said to have a mandate from their respective “constituency”, but this “constituency” need not be the public as a whole. In the Tata case, the RIVM and GGD can be expected to consult with different stakeholders, but this does not apply to the researchers commissioned by the local interest groups. In their case, research questions were formulated by interest groups who are under no obligation to consult the public at large or to give a balanced view. This notion is not new. Helen Longino, for instance, has in the past come up with an account of what it can mean for scientists to be accountable to partisan groups. As she writes:

The feminist scientist is responsive to the ideals of a political community as well as to some subset of the standards endorsed in her or his scientific community. [...] One colleague has suggested that we can choose to be thus accountable to a world larger than both. I suppose this is so, as long as this world is a definable social community whose members can hold us accountable and not an imagined one or nature itself. (1990, p. 192)

Besides the assessment of partisan science in relation to their mandate, we can also evaluate and discuss the mandate itself and its impact on the representativeness and inclusivity of the system as a whole. At this level, we can find political arguments for why some instances of industry funded research are not democratically legitimate. The representative argument that I have made in favour of partisan science rests on the assumption that there are substantial power differences within society at large as well as within science and that improved democratic representation may serve as an antidote to this situation. From here it also follows that groups who and views that are already overrepresented cannot lay claim to arguments in favour of partisan science.⁹ When big industries are involved in scientific research it seems clear that, given their

⁹ The differentiation between marginalised and dominant groups and actors is certainly not always clear. This has been pointed out, among others, by Holman and Wilholt 2022 in response to standpoint theoretical approaches; it also gives rise to much societal debate. Given the intersectionality of discrimination and underrepresentation groups can consider themselves marginalised who are in many ways privileged. Furthermore, narratives of marginalisation and of grassroot movements fighting against the establishment can also be abused, as we can see in cases of so-called astroturfing (Kurtulmuş, 2021). While it is important to acknowledge these difficulties, it does not follow that power differentials are always obscure.

financial power, they ought not be considered marginalised actors.¹⁰ Accordingly, from a democratic perspective, industry funded research that prioritises the interests of a company over the interests of the public does not operate with a legitimate mandate. How to deal with this in practice is an issue that I will have to leave unanswered at this point. Yet it goes to show that the representative approach proposed here is capable of providing political grounds for why “text book” cases of problematic partisan science, such as industry funded climate change denial discourse, some research by pharmaceutical companies and the tobacco industry’s doubtmongering (Oreskes & Conway, 2010; Proctor, 2011; Hicks, 2014), are indeed objectionable.

Two last concerns about partisan science require attention before coming to a close. One might worry that the epistemic quality of partisan science is more likely to be compromised than that of public interest science due to the influence of non-epistemic motivations. When people or groups are strongly committed to a cause, they might be more likely to be biased or engage in “wishful thinking” (cf. Douglas, 2016; Elliott, 2017). Whether or not this is the case is an empirical question. But there are reasons to doubt that this is more of a problem for partisan science than for other research. Once more, feminist scholars –amongst others – have argued that activists are more aware of their own values and biases and better able to justify their positions than people who consider themselves neutral and impartial (Longino, 1990; Wylie, 2012; Schiebinger, 1999). Furthermore, as mentioned in section four, there are epistemic constraints and methodological standards that apply to partisan science, too, and to which they can be held accountable by other scientists. The second concern is that, due to their explicit commitment to represent the interests of specific groups, partisan scientists will be less credible in the eyes of those who are not members of the represented group, particularly of laypeople (Schroeder, 2021; Bright, 2018). With strong instances of partisan science, this will likely be the case. When a Black Lives Matter group commissions research into instances of racist police violence, the results will likely be more credible to Black Lives Matter activists than to white supremacists. Even more so, it is important to find a good balance between partisan research and public interest science that is credible to members of different factions.

6 Conclusion

To conclude, let me return to the tension outlined in the introduction. Partisan science has been an important part of rectifying injustices, reducing ungrounded exclusion and correcting biases or misunderstandings in science. This same science lacks the democratic legitimation that, according to various contemporary philosophers of science, value judgements in research should have. In the course of this paper I have sought to clarify the various ways to understand democratic legitimacy and argued that we should apply the concept to the level of representative mandates rather than value judgements. Doing so allows us to advocate for a pluralism of mandates that acknowledges both the importance of public interest/democratically legitimated science and partisan science.

¹⁰ Thanks to an anonymous reviewer for rightly insisting on this aspect.

There are a number of problems that go unanswered in this paper. It is a thorny question whether and how scientists can switch roles and mandates, and what consequences it has when they cannot. Activist researchers have in the past been excluded from (leadership) positions on expert committees because they were not perceived to be able to function in a non-partisan way. When there are many experts on a topic, this might not be much of a problem. But when only a handful of potential advisors are available on a matter of public concern, such fixity of perceived representative roles can have negative consequences (Oppenheimer et al., 2019). I also skipped over the question of what mandate “regular” university researchers and staff have in this framework, focusing instead on a more clear-cut case of governmental research institutions. These questions, like various other ones, require further discussion. The argument of this paper, however, is that such discussions should acknowledge the need for a plurality of mandates. From the point of view of a representative framework, it can indeed be valuable to have scientists who remain impartial and are perceived as authoritative by all parties of a conflict. But impartiality is rarely devoid of political dimensions and often biased towards the status quo. Partisan science is an important to challenge the status quo, a contribution that deserves to be acknowledged in philosophical ideals of science.

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